of hyperlipidemia, smoking and family history respectively in addition to the components of the CHA2DS2-VASc score and male instead of female gender. The aim was to investigate whether these risk scores can be used to predict CAD severity.
Methods and results: A total of 2976 consecutive patients who underwent coronary angiography were enrolled in the study. Presence of >50% stenosis in a coronary artery was assessed as significant CAD. Of the patients, 804 had normal coronary angiograms and served as group 1. The remaining 2172 patients with coronary stenosis were further classified into 2 groups according to CAD with stenosis of <50% or >50%: 834 patients with mild CAD as group 2 and 1338 patients with severe CAD as group 3. The CHADS2, CHA2DS2-VASc, CHA2DS2-VASc-HS and CHA2DS2-VASc-HSF scores were significantly different among the 3 groups. All the four scores correlated significantly with the number of diseased and the Gensini score.
The CHA2DS2-VASc-HS and CHA2DS2-VASc-HSF score was found to be the best scoring scheme to predict CAD severity in the area under the curve comparison of these scoring systems.
Conclusion: Our findings suggest that the CHADS2, CHA2DS2-VASc, and especially CHA2DS2-VASc-HS and CHA2DS2-VASc-HSF scores could be considered predictive of the risk of severe CAD. The risk scoring systems may play an important role as predictive models because they are simple and can be easily applied by physicians without any additional costs in routine practice.

Vascular aging in healthy population of both sexes in 3 strata of South Indian population

S. Thanikachalam *, V. Harivanzan, C. Anbarasi, G. Nagarjuna, Aashish Chopra, T.R. Muralidharan

Sri Ramachandra University, Porur, Chennai 600116

Background: The arterial stiffness (AS) is an index of vascular health and has been shown to cause additional independent predictive value for adverse cardio vascular outcome in the general population. The aim of this work is to establish normal values in both sexes in different age groups of healthy population as a part of epidemiology study – PURSE HIS.
Materials and methods: *Study design*: Multistage stratified randomised cluster sampling. *Study setting*: Urban (Chennai), semi-urban and rural areas from Thiruvallur and Kanchipuram districts of Tamil Nadu. *Sample size*: 741study participants of both gender with age 20–60 years.
Methods: Arterial pressure wave forms were obtained from radial artery, right common carotid artery and right femoral artery by applanation tonometer using SphygmoCor MM3®. PWV, AAIx, ASP, APP and AAP were registered as determinants of vascular stiffness. The present analysis is a descriptive observational cross sectional study of the healthy subjects (without any of the atherogenic risk factors) during the period 2007–2012.
Results: Among the recruited 741 healthy subjects, 152 males and 589 females. The results were analyzed chronologically in 10 year age interval and ANOVA test (for statistical significance) between the age groups is depicted in the table below.

Variable	Male					Female				
	20–29 yrs (*n* = 32) Mean ± SD	30–39 yrs (*n* = 47) Mean ± SD	40–49yrs (*n* = 43) Mean ± SD	50–59 yrs (*n* = 30) Mean ± SD	*p* value	20–29 yrs (*n* = 132) Mean ± SD	30–39yrs (*n* = 277) Mean ± SD	40–49yrs (*n* = 141) Mean ± SD	50–59 yrs (*n* = 39) Mean ± SD	*p* value
ASP	104.4 ± 9.41	108.78 ± 10.20	109.6 ± 14.02	116.26 ± 16.11	<0.01	97.75 ± 9.14	101.64 ± 12.06	108.25 ± 13.97	109.48 ± 13.86	<0.01
AAP	4.18 ± 4.61	7.04 ± 5.20	10.27 ± 5.58	13.2 ± 6.99	<0.01	4.44 ± 3.73	6.64 ± 4.64	10.53 ± 6.04	11.79 ± 5.24	<0.01
APP	31.34 ± 7.40	34.48 ± 8.34	36.09 ± 9.15	42.46 ± 13.47	<0.01	28.89 ± 6.80	30.72 ± 8.69	35.49 ± 8.68	36.61 ± 7.91	<0.01
AAIx	10.06 ± 11.36	15.52 ± 8.84	21 ± 9.03	24.56 ± 8.79	<0.01	14.36 ± 9.76	20.6 ± 10.14	26.97 ± 9.47	30.02 ± 7.92	<0.01
aPWV	6.63 ± 10.3	7.42 ± 1.61	6.95 ± 1.37	8.38 ± 2.20	<0.01	5.97 ± 0.92	6.54 ± 1.04	7.18 ± 1.35	7.34 ± 1.38	<0.01

ASP, central aortic systolic pressure; AAP, aortic augmented pressure; APP, aortic pulse pressure; AAIx, aortic augmentation index; aPWV, pulse wave velocity.

Conclusion: This is the first population based research study on vascular biology in South Indian. The study indicates the arterial stiffness progressively increase with advancing age in healthy subjects as opposed to Caucasian and western population. The change in the trend of vascular stiffness occurs in >40 years, 10 years earlier.

Risk factors for coronary artery disease in young patients: Comparison between urban and rural groups: A hospital based study

Bhagat Kush Kumar *, S.K. Sinha, U. Pandey, R.K. Bansal, M. Ahmad, R.P.S. Bharadwaj, R. Thakur, C.M. Verma

LPS Institute of Cardiology, Kanpur, India

Introduction: CAD is the leading cause of death worldwide. The prevalence of coronary artery disease and its various risk factors are different among both urban and rural populations. CAD is becoming more and more common among younger individuals. There are many risk factors for CAD in young and it is essential to find out prevalence and distribution of these risk factors among urban and rural population which will help in primary and secondary prevention of the disease.
Objective: To assess the risk factors for coronary artery disease in young patients. To compare the risk factors among urban and rural groups.
Methods: We conducted a hospital based observational study of 200 young patients (≤45 years of age) presenting with coronary artery disease. Risk factors for CAD were assessed among them. Patients were classified into urban and rural groups and comparison of these risk factors among them was done.
Results: Risk of CAD was (69%) in males as compared to females (31%). Male preponderance was seen as compared to females with male to female ratio of 1.4:1. 3.5% cases belonged to age group of